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09/577,292	05/23/2000	Alireza Abaye	11470BAUS01U	3517

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EXAMINER
LY, ANH VU H

ART UNIT	PAPER NUMBER
2667	2

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/577,292	ABAYE ET AL.	
	Examiner	Art Unit	
	Anh-Vu H Ly	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,13-41 and 44-63* is/are rejected.

7)☒ Claim(s) *11,12,42 and 43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.
>
> The declaration does not provide the residence information of inventor, Moses Sun.

Claim Objections

2. Claims 1, 3-4, and 62 are objected to because of the following informalities:

With respect to claims 1 and 62, there is no ending period in line 8.

With respect to claims 3 and 4, "wherein the selecting" lacks antecedent basis. Claim 1 does not recite a method of selecting one or more network resources. Examiner believes claims 3 and 4 should depend on claim 2 since a method of selecting is recited in line 1 of claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 11-17, 19-37, 42-46, 48-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheung et al (US Patent No. 6,515,964). Hereinafter, referred to as Cheung.

With respect to claims 1-2, 32-33, and 61-63, Cheung discloses in Fig. 2 a system for transporting voice signals over the packet network 140, wherein the admission control gateway 100 receives a call request from the first network 110 containing the call characteristic requirements (receiving a call request capable of affecting a network resource, the call request defining a throughput requirement).

The limitations "transmitting a throughput measurement request for the network resource" and "receiving a throughput measurement response including a throughput measurement corresponding to the network resource" are inherent to Cheung. Cheung discloses (col. 7, lines 36-39) that the gateway 100 ascertains the network performance parameters data by accessing quality of service computer 320 of Fig. 4 (transmitting a request and receiving a response) that determines the appropriate data for each gateway (throughput measurement corresponding to the network resource).

Cheung discloses (col. 8, lines 4-15) that network characteristic parameters data are then determined and compared to the call characteristic requirements. If the comparison satisfies the call characteristic requirements, then a connection is established between the communication devices 111 and 191 shown in Fig. 3. Herein, a call admission response is transmitted back to the requester indicating whether a call request is admitted or rejected (transmitting a call admission response when the throughput measurement at least substantially matches the throughput requirements of the call request).

With respect to claims 3 and 34, Cheung discloses (col. 5, lines 3-12) that various call actions can be taken if the voice call can not be admitted to the packet switched network such as holding the voice call, sending the calling party a busy signal, providing the calling party the option of having the system call him or her back when the VoIP call can be admitted to the network, or rerouting the voice call over another network, such as a conventional circuit-switched network (selecting one or more network resources is based on the call admission response).

With respect to claims 4 and 35, Cheung discloses in Fig. 4, quality of service computer 320 for determining the network performance parameters (selecting one or more network resources is determined by usage policy of a policy server).

With respect to claims 5 and 36, Cheung discloses (col. 4, lines 26-30) that call quality requirements for the various performance parameters of the packet-switched network can be established to enable a higher quality of service for certain calls (throughput requirement relates to a perceptible quality of service).

With respect to claims 6 and 37, the limitation "throughput requirement is specified in a packet header" is inherent to Cheung. Cheung discloses (col. 8, lines 36-37 and Fig. 4) that the admission control gateway 300 receives the call from the initiator computer 310. From the illustration shown in Fig. 4, the communicated messages between the gateway and the computer

must be in the form of packets and furthermore, each packet is known to comprise the header and payload portion. Wherein, header portion is known for carrying controlled information.

With respect to claims 13 and 44, Cheung discloses (col. 6, lines 7-9) that quality of service can be monitored and access controlled to allow calls into the IP network acceptable service is assured (monitoring usage of at last one of the network resources).

With respect to claims 19-21 and 48-50, Cheung discloses (col. 5, lines 3-12) that various call actions can be taken if the voice call can not be admitted to the packet switched network such as holding the voice call, sending the calling party a busy signal, providing the calling party the option of having the system call him or her back when the VoIP call can be admitted to the network, or rerouting the voice call over another network, such as a conventional circuit-switched network (selecting an alternative resource as the network resource when the throughput measurement does not substantially match the throughput requirement of the call request; wherein the alternative resource comprising a switched telephone network and further comprising a dedicated communications link interconnecting devices).

With respect to claims 22 and 51, Cheung discloses (col. 5, lines 3-12) that various call actions can be taken if the voice call can not be admitted to the packet switched network such as holding the voice call, sending the calling party a busy signal (transmitting an alternative resource call admission response when the throughput measurement does not substantially match the throughput requirement of the call request), providing the calling party the option of having

the system call him or her back when the VoIP call can be admitted to the network, or rerouting the voice call over another network, such as a conventional circuit-switched network.

With respect to claims 23-25 and 52-54, Cheung discloses (col. 4, lines 14-17) that the state of a packet switched network can be indicated by a number of performance parameters, including total delay, mean and standard deviation for such delay, packet loss, error rate, etc ... (determining a condition of the network resource, wherein the determining including determining a delay in the throughput measurement in the network; wherein the determining including a percentage of packet loss in the network).

With respect to claims 26 and 55, Cheung discloses (col. 4, lines 14-17) that the state of a packet switched network can be indicated by a number of performance parameters, including total delay, mean and standard deviation for such delay, packet loss, error rate, etc ... (determining an expected quality of service based on the determined condition of the network resource).

With respect to claims 27 and 56, Cheung discloses (col. 8, lines 7-12) a determination is made whether a call request is accepted or rejected (performing call admission control to accept or deny the call request).

With respect to claims 28 and 57, Cheung discloses (col. 8, lines 7-12) that the network characteristic parameters data are determined (wherein performing call admission control is based on usage of a link in the network).

With respect to claims 29 and 58, Cheung discloses in Fig. 2, a system for admitting call between a first telephone device 111 (first terminal), coupled to the first network 110, and a second telephone device 191 (second terminal), coupled to third network 190. Herein, telephone device 111 and first network are considered as first community, and telephone device 191 and third network are considered as second community. Wherein, first community and second community are connected via paths or links or channels of the IP network 140 (a link in the network for coupling the two communities).

Cheung discloses (col. 4, lines 14-17) that the state of a packet switched network (policy of the links of the IP network) can be indicated by a number of performance parameters, including total delay, mean and standard deviation for such delay, packet loss, error rate, etc ... (wherein performing call admission control includes performing call admission control based on a policy for the link between the communities).

With respect to claims 30 and 59, the limitation "bypassing the call admission control within at least one community" is inherent to Cheung. Since only one telephone device shows Fig. 2 for the purpose of illustration, if another telephone device couples to the first network 110, then two telephone devices can communicate via the first network 110 without the intervention of the admission control gateway.

With respect to claims 31 and 60, Cheung discloses in Fig. 4, the initiator computer 310 for initiating call request, the admission control gateway 300 for determining whether a call is accepted or rejected based on the throughput requirement and network performance

characteristic parameters, quality of service computer 320 for collecting the usage and network conditions of the network 340, and contacted computer 390 for accepting a call from initiator computer 310 are coupled via link(s) (data bus) (one of the call request, the throughput measurement, the throughput measurement request, the throughput measurement response, and the call admission response is communicated over a data bus).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 7-10 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (US Patent No. 6,515,964).

With respect to claims 7-9 and 38-40, Cheung discloses a method and apparatus for dynamically controlling the admission of calls to a network, wherein call requests received at the gateway are containing call characteristic requirements. Cheung does not disclose throughput requirement complies with either RFVP or Diffserv Protocol, or MPLS protocol. However, such protocols are known in the art for carrying the specified and/or requested parameters originated from the source and send along the path to the destination, including the intermediate nodes for setting up a connection with a guarantee quality of service. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of having the throughput requirement complies with such above protocols in Cheung's system to reserve network resources.

With respect to claims 10 and 41, Cheung discloses a method and apparatus for dynamically controlling the admission of calls to a network, wherein call requests received at the gateway are determined whether the call is admitted or rejected. Cheung does not disclose call request complies with SIP. However, SIP is known in the art for initiating and/or setting connections between two points in a network. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of sending call request in accordance to the Session Initiation Protocol in Cheung's system to set up a connection.

5. Claims 14-17 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (US Patent No. 6,515,964) in view of Chen et al (US Patent No. 5,793,976). Hereinafter, referred to as Cheung and Chen.

With respect to claims 14-15 and 45-46, Cheung discloses (col. 7, lines 36-39) that the gateway 100 ascertains the network performance parameters data by accessing quality of service computer 320 of Fig. 4 (transmitting a request and receiving a response) that determines the appropriate data (throughput measurement) for each gateway. Cheung does not disclose the request comprising at least one trace packet and a trace route. Chen discloses (col. 4, lines 40-46) that a new class of packet (trace packet) is defined which has a payload that is modified by each node along a virtual connection. Management packets are used to accurately measure and report the end-to-end QoS along a virtual connection (a trace route). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features

of having at least one trace packet and/or a trace route in the request in Cheung's system, as suggested by Chen, to measure and report end-to-end QoS of the communication.

With respect to claims 16 and 17, Cheung discloses (col. 7, lines 36-39) that the gateway 100 ascertains the network performance parameters data by accessing quality of service computer 320 of Fig. 4 (transmitting a request and receiving a response) that determines the appropriate data (throughput measurement) for each gateway. Cheung does not disclose the trace route comprising a list of network resources and monitoring the network resources in the list to maintain the throughput requirement. Chen discloses in Figs. 2 and 4, the QoS along the virtual connection (trace route) is measured and reported (monitoring network resources in the list to maintain the throughput requirement) such as delays and lost packets. Herein, delays and lost packets are considered as list of network resources. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of measuring delays and lost packets in Cheung's system, as suggested by Chen, to predict the QoS of the communication.

6. Claims 18 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (US Patent No. 6,515,964) in view of Vargo et al (US Patent No. 6,356,545). Hereinafter, referred to as Cheung and Vargo.

With respect to claims 18 and 47, Cheung discloses a method and apparatus for dynamically controlling the admission of calls to a network, wherein call requests received at the gateway are determined whether the call is admitted or rejected. Cheung does not disclose

selecting one or more sizes of a data packet as candidates for carrying audio data in the requested call. Vargo discloses in Fig. 3, an apparatus for managing calls in a system including an interface (NIC26) for receiving a call request to establish a call between two endpoints and a control unit (23 and 24) for processing the request and to control the selection of resource elements such as codec (col. 7, lines 27-35) or packet size (col. 7, lines 6-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of selecting one or more sizes of a data packet as candidates as specified in the requested call in Cheung's system, as suggested by Vargo, to accommodate quality of service of a call based on the usage or condition of the network.

Allowable Subject Matter

7. Claims 11-12 and 42-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reininger et al (US Patent No. 6,404,738) discloses dynamic network bandwidth allocation for multimedia applications with soft quality of service requirements.

Valko et al (US Patent No. 6,266,323) discloses resource estimation for variable bit rate data sources.

Chevalier et al (US Patent No. 6,262,974) discloses method and system for non-disruptive assigning link bandwidth to a user in a high-speed digital network.

Itoh (US Patent No. 6,538,993) discloses a method for controlling QoS in an ATM network.

Kalmanck, JR. et al (US Pub No. 2003/0007622) discloses method for allocating network resources.

Hodgkinson et al (US Patent No. 6,163,807) discloses a method of reserving resources in an Internet.

Focsaneanu et al (US Patent No. 5,828,666) discloses a method for providing flexible and adaptable multi-service access to the networks.

Jarvis et al (US Patent No. 5,870,561) discloses a policy-driven network traffic manager for recommending individual application programs whether and optionally under what conditions, they should generate network traffic.

Ward et al (US Patent No. 6,556,565) discloses a quality of service server.

Gossett Dalton, Jr. e al (US Patent No. 6,426,955) discloses an Internet telephony call routing engine.

Chen et al (US Patent No. 6,487,170) discloses a method for making admission decisions in a packet switched network.

Sohraby et al (US Patent No. 2002/0150054) discloses resource usage measurement technique for pricing in a communications network.

Young (US Patent No. 6,515,973) discloses method of establishing a soft circuit between a source node and a destination node in a network of nodes to allow data to be transmitted there between.

Doshi et al (US Patent No. 6,529,499) discloses method for providing quality of service for delay sensitive traffic over IP networks.

Bennnefeld et al (US Patent No. 6,519,249) discloses an IP telephony system.

Marin et al (US Patent No. 6,222,824) discloses a statistical call admission control.

Arrowood et al (US Patent No. 5,881,051) discloses a packet communications network including a centrally controlled route testing system.

Knauerhase et al (US Patent No. 6,215,774) discloses a method for determining effective link speed for communications from a first device to a second device.

Borella et al (US Patent No. 6,442,141) discloses a test system and method for providing a network simulator to simulate the packet delivery delay and loss dynamics of a network such as the Internet.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

avl
July 18, 2003

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 7/23/03